



# AOM19.1 — ASM Support Tools to Support Advanced FUA (AFUA)

Deploy Airspace Management (ASM) support systems (LARA or locally developed) and their interoperability with NM systems to manage airspace reservations (ARES) resulting from civil-military co-ordination, more flexibly according to airspace users' needs.

The automated ASM support system shall:

- enable the improvement of airspace management processes, including timing dimension by providing mutual visibility on civil and military requirements;
- support a flexible airspace planning taking into account ATS units' airspace management functions and airspace users' requirements, allowing also cross-border and segregated operations with optimized impact;
- support dynamic airspace management;
- address strategic, pre-tactical planning and tactical operations;
- be compatible for the sharing of real-time airspace status requirements and possibly provide data for impact assessment of airspace configurations;
- be interoperable with NM systems using AIXM 5.1 (Aeronautical Information Exchange Model);
- include a verification process for automated data exchange.

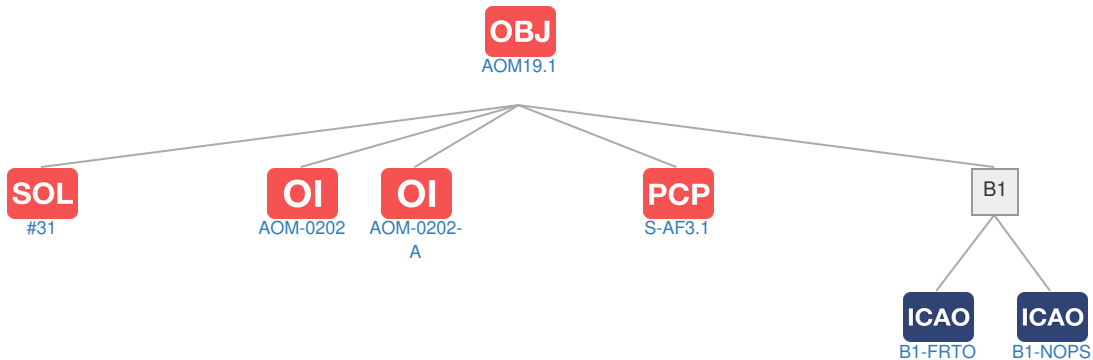
This objective is an enabler for its successors AOM19.2, AOM19.3 and AOM19.4 and, in turn, for ATM sub-functionality 3.1 (Airspace Management and Advanced Flexible Use of Airspace) of the PCP Regulation.

*NOTE FOR MILITARY AUTHORITIES: It is the responsibility of each military authority to review this Objective IN ITS ENTIRETY and address each of the SLoAs that the military authority considers RELEVANT for itself. This has to be done on top and above of the review of "MIL" SLoAs which identify actions EXCLUSIVE to military authorities.*

<b>Edition</b>	2022
<b>Stakeholders</b>	Air Navigation Service Provider / Network Manager
<b>Type</b>	PCP
<b>Scope</b>	ECAC+
<b>Status</b>	Removed

## Context

### Related Elements




## Applicability Area(s) and Timescales

**Applicability Area:** All ECAC States except: Armenia, Azerbaijan, Luxembourg, Malta, Moldova, North Macedonia, Sweden. Plus: Israel, Morocco

Timescales	From	By	Applicable to
Initial operational capability	01-01-2011	-	Applicability Area
Full operational capability	-	01-01-2022	Applicability Area

## Links to ATM Master Plan Level 2

### **OI** Operational Improvement Steps

Code	Title	IOC	FOC	Related Elements
AOM-0202	Enhanced Real-time Civil-Military Coordination of Airspace Utilisation	31-12-2019	31-12-2023	<b>OI</b> <b>EN</b> <b>OBJ</b> <b>ICAO</b>
AOM-0202-A	Automated Support for strategic, pre-tactical and tactical Civil-Military Coordination in Airspace Management (ASM).	31-12-2020	31-12-2025	<b>SOL</b> <b>OI</b> <b>EN</b> <b>OBJ</b> <b>DS</b> <b>PCP</b> <b>ICAO</b> 

### **SOL** Links to SESAR Solutions

Code	Title	Program	Related Elements
#31	Variable profile military reserved areas and enhanced (further automated) civil-military collaboration	SESAR1	<b>SOL</b> <b>OI</b> <b>OBJ</b> <b>DS</b> <b>EOC</b> <b>PCP</b> <b>ICAO</b>

### **PCP** Links to PCP ATM Sub-Functionalities

Code	Title	Related Elements
S-AF3.1	Airspace Management and Advanced Flexible Use of Airspace	<b>SOL</b> <b>OI</b> <b>EN</b> <b>OBJ</b> <b>ICAO</b>

### **ICAO** ICAO Block Modules

Designator	Title	Related Elements
B1		
B1-FRTO	Improved Operations through Optimized ATS Routing	<b>SOL</b> <b>OI</b> <b>OBJ</b> <b>PCP</b>
B1-NOPS	Enhanced Flow Performance through Network Operational Planning	<b>SOL</b> <b>OI</b> <b>OBJ</b> <b>PCP</b>

## References

#### Applicable legislation

- Regulation (EC) No 2150/2005 of 23 December 2005 on Implementation and Application of the Flexible Use of Airspace
- Regulation (EU) No 716/2014 on the establishment of the Pilot Common Project

#### Applicable ICAO Annexes and other references

None

#### Deployment Programme 2022

-

#### Operating Environments

Terminal Airspace  
En-Route  
Network

## Expected Performance Benefits

<b>Safety</b>	Improved through better co-ordination of civil and military airspace needs at the European Network level and through a shared real-time airspace status display and enhanced, common situational awareness of all players.
<b>Capacity</b>	Increased through better awareness and utilization of airspace resources within and across airspace boundaries leading to reduction of flight delays.
<b>Operational efficiency</b>	Increased through the availability of more optimum routes/trajectories allowing lower fuel burn.
<b>Cost efficiency</b>	-
<b>Environment</b>	Emissions reduced through the use of more optimum routes/trajectories.
<b>Security</b>	-

## Stakeholder Lines of Action

Code	Title	From	By	Related Enablers
ASP01	Deploy automated ASM support systems	01-01-2011	01-01-2022	EN
ASP02	Implement interoperability of local ASM support system with NM system	01-01-2011	01-01-2022	EN
ASP03	Improve planning and allocation of airspace booking	01-01-2011	01-01-2022	
NM01	Integrate local ASM support systems with NM system	01-01-2011	01-01-2022	EN

## Supporting Material

Title	Related SLoAs
EUROCONTROL - Advanced FUA Concept - Edition 1.0 <a href="http://www.eurocontrol.int/sites/default/files/publication/files/advanced-fua-concept-v1.0-sept-2015.pdf">http://www.eurocontrol.int/sites/default/files/publication/files/advanced-fua-concept-v1.0-sept-2015.pdf</a>	ASP01, ASP02, ASP03, NM01
EUROCONTROL - Civil-military ATM Performance Framework - V1.0 <a href="http://www.eurocontrol.int/publications/civil-military-atm-performance-framework">http://www.eurocontrol.int/publications/civil-military-atm-performance-framework</a>	ASP03
EUROCONTROL - European Route Network Improvement Plan (ERNIP) Part 3 - Airspace Management Handbook - Guidelines for Airspace Management - 5.5 / 11/2017 <a href="https://www.eurocontrol.int/publication/european-route-network-improvement-plan-ernip-part-3">https://www.eurocontrol.int/publication/european-route-network-improvement-plan-ernip-part-3</a>	ASP01, ASP02, ASP03, NM01
EUROCONTROL - LARA (Local and sub-Regional Airspace Management Support System) <a href="https://www.eurocontrol.int/software/local-and-sub-regional-airspace-management-support-system">https://www.eurocontrol.int/software/local-and-sub-regional-airspace-management-support-system</a>	ASP01, ASP02, NM01
EUROCONTROL - NM B2B Airspace Services Reference Manual <a href="https://www.eurocontrol.int/service/network-manager-business-business-b2b-web-services">https://www.eurocontrol.int/service/network-manager-business-business-b2b-web-services</a>	ASP02
EUROCONTROL - SPEC 166 - EUROCONTROL Specification for Airspace Management (ASM) Support System Requirements supporting the ASM processes at local and FAB level Part I - Baseline Requirements - Edition 1.0 / 09/2017 <a href="https://www.eurocontrol.int/publication/eurocontrol-specification-airspace-management-asm-support-system-requirements">https://www.eurocontrol.int/publication/eurocontrol-specification-airspace-management-asm-support-system-requirements</a>	ASP01, ASP02, ASP03, NM01
EUROCONTROL - SPEC-112 - EUROCONTROL Specification for the application of the Flexible Use of Airspace (FUA) - Edition 1.1 / 01/2009 <a href="https://www.eurocontrol.int/publication/eurocontrol-specification-application-flexible-use-airspace-fua">https://www.eurocontrol.int/publication/eurocontrol-specification-application-flexible-use-airspace-fua</a>	ASP01, ASP02, ASP03
EUROCONTROL - SPEC-179 - EUROCONTROL Specification for Airspace Management (ASM) Support System Requirements supporting the ASM processes at local and FAB level Part II ASM to ASM Systems Interface Requirements - 1.0 / 01/2020 <a href="https://www.eurocontrol.int/publication/eurocontrol-specification-airspace-management-asm-support-system-requirements">https://www.eurocontrol.int/publication/eurocontrol-specification-airspace-management-asm-support-system-requirements</a>	ASP01, ASP02, ASP03, NM01

## Consultation & Approval

<b>Working Arrangement in charge</b>	NETOPS
<b>Outline description approved in</b>	-
<b>Latest objective review at expert level</b>	05/2021
<b>Commitment Decision Body</b>	Provisional Council (PC)
<b>Objective approved/endorsed in</b>	09/2016
<b>Latest change to objective approved/endorsed in</b>	-